

Fig. 1

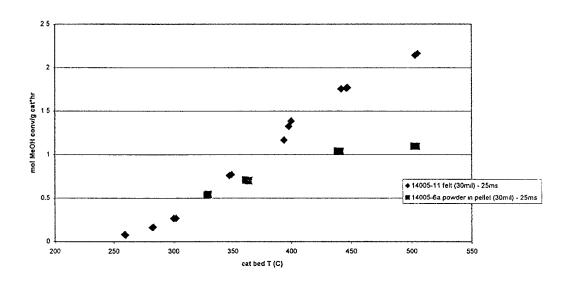


Fig. 2

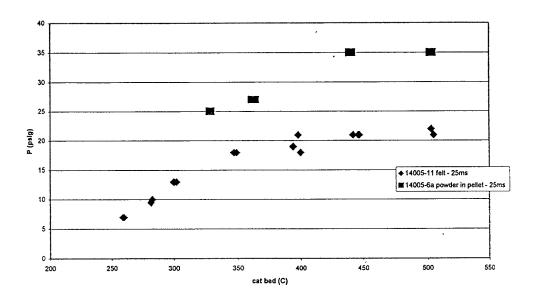


Fig. 3

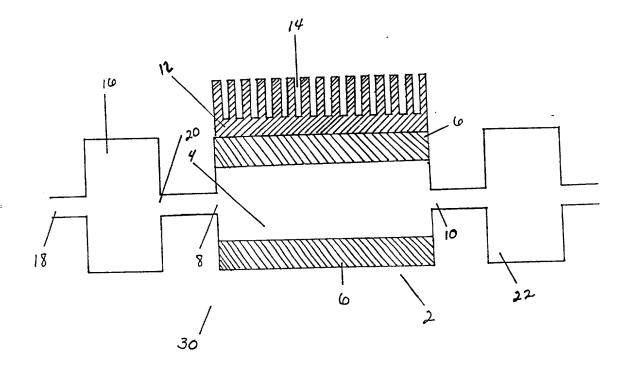


Fig. 4

## **Experimental Set-up**

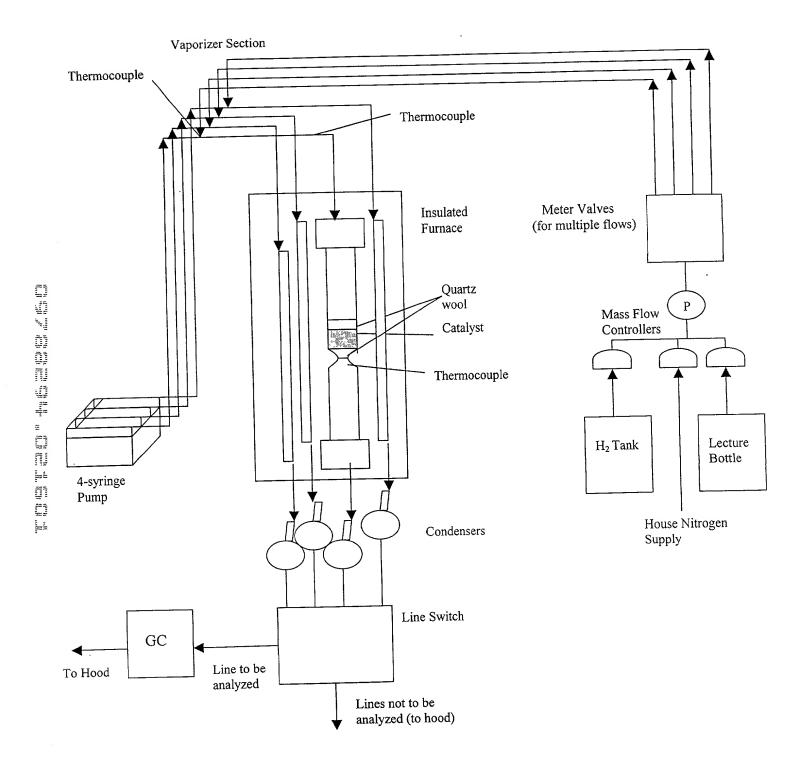


Fig. 5

♦ 8%Pd-1.5%Ru/ZrO2-CeO △ 3%Ru/ZrO2-CeO ■ 5%Pd-5%Ru/ZrO2-CeO □ 5%Pd-5%Ru/ZrO2-CeO ◆ commercial catalyst ▲ 3%Ru/Al2O3-CeO Ru/Al2O3 440 420 400 380  $\Diamond$ 360 ◁ 340 cat bed T (C) 320 ◁ 300 4 280 260 240 220 0.0 20.0 10.0 30.0 0.09 50.0 40.0 . 0.08 70.0 90.0 110.0 100.0 % noizravnoo

Fig. 6

(CT=300ms, P=1 atm, H2O:C=1.8)

MeOH SR

**MeOH SR - H2** (CT=300ms, P=1 atm, H2O:C=1.8)

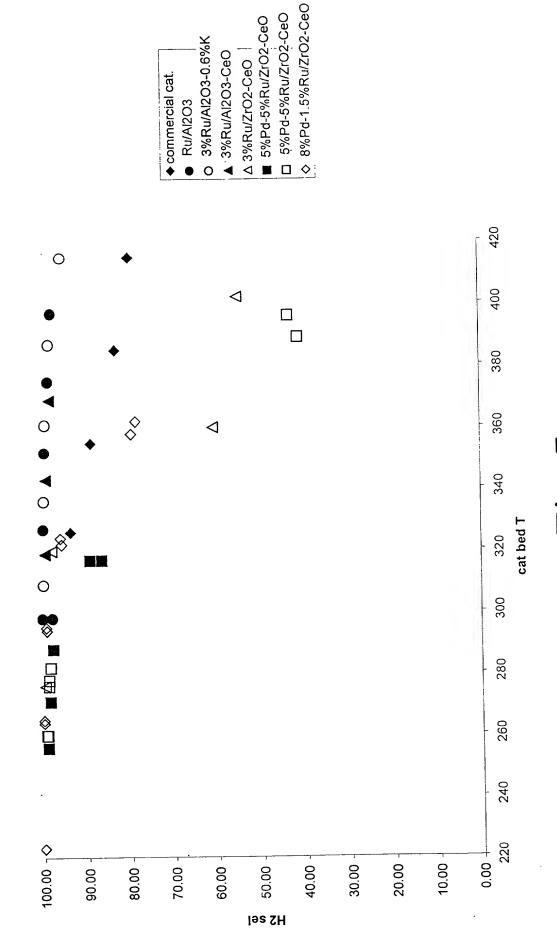


Fig. 7

MeOH SR

□ 5%Pd-5%Ru/ZrO2-CeO ♦ 8%Pd-1.5%Ru/ZrO2-CeO ■ 5%Pd-5%Ru/ZrO2-CeO O Ru/Al2O3-K ▲ 3%Ru/Al2O3-CeO ∆ 3%Ru/ZrO2-CeO ◆ commercial cat. Ru/Al2O3 420 0 **∇**□□ (CT=300ms, P= 1 atm, H2O:C=1.8) 370 cat bed T (C) 320 0 270 ♦ 220 **\rightarrow** 0.00 10.00 20.00 00.09 50.00 40.00 30.00 90.00 80.00 70.00 100.00

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Fig. 8